

PRINTER RUSH
(PTO ASSISTANCE)

Application : 101755198 Examiner : 6060 GAU : 3662
From : J. Blach Location : (IDC) FMF FDC Date : 4/28/05
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DOC CODE	DOC DATE	MISCELLANEOUS
<input type="checkbox"/> 1449		<input type="checkbox"/> Continuing Data
<input type="checkbox"/> IDS		<input type="checkbox"/> Foreign Priority
<input checked="" type="checkbox"/> CLM	<u>11/12/04</u>	<input type="checkbox"/> Document Legibility
<input type="checkbox"/> IIFW		<input type="checkbox"/> Fees
<input type="checkbox"/> SRFW		<input type="checkbox"/> Other
<input type="checkbox"/> DRW		
<input type="checkbox"/> OATH		
<input type="checkbox"/> 312		
<input type="checkbox"/> SPEC		

[RUSH] MESSAGE:

Original claims 6, 27 and 48 are incomplete. They
do not end with a period.

Please respond.

[XRUSH] RESPONSE:

Corrected

See Attachments

INITIALS: KP

NOTE: This form will be included as part of the official USPTO record, with the Response document coded as XRUSH.
REV 10/04

1075

21 (ix) P-wave amplitude attribute displays;

22 (x) S-wave amplitude attribute displays.

3. Canceled

4. Canceled.

1 5. (new) A computer system implementing a computer program comprising
2 instructions for:

3 (a) accessing subsurface seismic data that is at least one of:

4 (A) a 2-D seismic line, and

5 (B) a 3-D seismic volume,

6 corresponding to a subsurface region;

7 (b) displaying, editing and datuming a well log associated with the subsurface
8 region and fitting a calibration curve to the log;

9 (c) predicting fluid and rock pressures in the subsurface region based at least
10 in part on the subsurface seismic data and results of the fitting; and

11 (d) displaying results of the prediction.

12

1 6. (new) The computer system of claim 5 further comprising instructions for

2 (i) identifying a plurality of seismic horizons from the subsurface seismic
3 data;

4 (ii) obtaining estimated seismic velocities corresponding to at least one
5 interval between at least one pair of said plurality of seismic horizons;

6 (iii) calibrating the estimated seismic velocities to the parameter of interest .

1 24. (new) The computer system of claim 6 further comprising instructions for estimation
2 of an overburden-depth relationship that is determined by integrating density data
3 obtained by inversion of 2-D or 3-D potential fields data.
4

5 25. (new) The computer system of claim 6 further comprising instructions for estimation
2 of an overburden-depth relationship by integrating density data obtained by
3 inversion of at least one of 2-D or 3-D seismic data, and wherein said seismic data
4 further comprise at least one of PP data and PS data.
5

1 26. (new) A machine readable medium comprising instructions for:

2 (a) accessing subsurface seismic data that is at least one of:

3 (A) a 2-D seismic line, and

4 (B) a 3-D seismic volume,

5 corresponding to a subsurface region;

6 (b) displaying, editing and datuming a well log associated with the subsurface
7 region and fitting a calibration curve to the log;

8 (c) predicting fluid and rock pressures in the subsurface region based at least
9 in part on the subsurface seismic data and results of the fitting; and

10 (d) displaying results of the prediction.
11

1 27. (new) The machine readable medium of claim 26 further comprising instructions
2 for

- 3 (i) identifying a plurality of seismic horizons from the subsurface seismic
4 data;
5 (ii) obtaining estimated seismic velocities corresponding to at least one
6 interval between at least one pair of said plurality of seismic horizons;
7 (iii) calibrating the estimated seismic velocities to the parameter of interest .
8

9 28. (new) The machine readable medium of claim 27 further comprising instructions
2 for:

3 calibrating the estimated seismic velocities using at least one of:

- 4 (A) a function determined independently from the seismic data using regional
5 information;
6 (B) data from a well corresponding to a specific calibration location
7 that is outside the areal extent of the seismic velocity data; and
8 (C) data from a well corresponding to a specific calibration location within the
9 areal extent of the seismic velocity data; and
10 (D) data from a well corresponding to a specific calibration location within the
11 areal extent of the seismic velocity data combined with the velocity data
12 from the seismic survey for the same said location.
13

1 29. (new) The machine readable medium of claim 28 further comprising instructions
2 for calibrating the estimated seismic velocities based on estimation of an
3 overburden-depth relationship that is determined by integrating density data from

- 8 (c) predicting fluid and rock pressures in the subsurface region based at least
9 in part on the subsurface seismic data and results of the fitting; and
10 (d) displaying results of the prediction on a display device associated with the
11 computer.

12

1 48. (new) The computer program of claim 47 further comprising instructions for:

- 2 (i) identifying a plurality of seismic horizons from the subsurface seismic
3 data;
4 (ii) obtaining estimated seismic velocities corresponding to at least one
5 interval between at least one pair of said plurality of seismic horizons;
6 (iii) calibrating the estimated seismic velocities to the parameter of interest .

7

8 49. (new) The computer program of claim 48 further comprising instructions for:

2 calibrating the estimated seismic velocities using at least one of:

- 3 (A) a function determined independently from the seismic data using regional
4 information;
5 (B) data from a well corresponding to a specific calibration location
6 that is outside the areal extent of the seismic velocity data; and
7 (C) data from a well corresponding to a specific calibration location within the
8 areal extent of the seismic velocity data; and
9 (D) data from a well corresponding to a specific calibration location within the
10 areal extent of the seismic velocity data combined with the velocity data